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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,617	11/20/2001	Sumio Nishiyama	107156-00080	8798

7590 08/26/2003

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EXAMINER

YANG, RYAN R

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,617

Applicant(s)

NISHIYAMA, SUMIO

Examiner

Ryan R Yang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-11 are pending in this application. Claims 1-6 are independent claims.

This action is non-final.

2. This application claims foreign priority dated 11/28/2000.
3. The present title of the invention is "Method and system for displaying images".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 4-7 and 9-11 rejected under 35 U.S.C. 102(e) as being anticipated by Suzuoki (6,441,819).

As per claim 1, Suzuoki discloses a method of displaying a vector-mode image in which a plurality of points designated on a screen are linked to display the required image, comprising the steps of:

classifying vector data, indicating a plurality of points for displaying the image, into a group of data indicating indispensable points required for recognizing the image, and a group of data indicating supplementary points for supplementing the indispensable points to display a more precise image, for storage on a storage member

("the division number is set to 1, as seen in FIG. 14A, and stores the coordinate values of the apexes of the polygon into the destination data RAM 97", column 12, line 57-60, where division number 1 indicates the smallest (indispensable) amount of points is used to represent an image; "FIG. 14B to produce four sub-polygons in accordance with the reference curved surface, and stores coordinate values of the apexes of the four sub-polygons into the destination data RAM 97", column 12, line 66 – column 13, line 2, where the apexes of the sub-polygons are supplementary points); and

selecting between displaying the image represented only by the data group indicating the indispensable points and displaying the image represented by the data group indicating the indispensable points plus the data group indicating the supplementary points, when the image is displayed ("FIG. 22A, a modeler 112 receives a signal corresponding to a manual operation of a designer, that is, a person who produces an image, from an inputting apparatus 111 and produces a three-dimensional object in response a manual operation of the designer. The modeller 112 supplies information regarding a curved surface of the produced three-dimensional object to an operation circuit 113 and supplies coordinate values of the apexes of polygons which form the produced three-dimensional object", column 16, line 40-49; the curvature of the surface is supplied by the designer, since the curvature determines the amount of apexes data are needed to generate the image, it ultimately determines whether the indispensable points or supplemental points are needed to generate the image.)

6. As per claim 2, Suzouki demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses the vector data indicating the

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supplementary points are classified into a plurality of data groups for supplementing the indispensable points in stages for storage on the storage member, and a selection among the classified plural data groups indicating the supplementary points is made in stages for supplementing the indispensable points in stages to display the image (Figure 14B shows apexes with four polygons, and Figure 14C shows apexes with sixteen polygons. All the data are stored with an identification, column 17, line 17-21).

7. As per claim 4, Suzouki demonstrated all the elements as applied to the rejection of independent claim 1, *supra*, and further discloses selection between displaying the image represented by the data group indicating the indispensable points and displaying the image represented by the data group indicating the indispensable points plus the data group indicating the supplementary points is made in accordance with the amount of data of the image ("FIG. 22A, a modeler 112 receives a signal corresponding to a manual operation of a designer, that is, a person who produces an image, from an inputting apparatus 111 and produces a three-dimensional object in response a manual operation of the designer. The modeller 112 supplies information regarding a curved surface of the produced three-dimensional object to an operation circuit 113 and supplies coordinate values of the apexes of polygons which form the produced three-dimensional object", column 16, line 40-49; the curvature of the surface is supplied by the designer, since the curvature determines the amount of apexes data are needed to generate the image, it ultimately determines whether the indispensable points or supplemental points are needed to generate the image.)

8. As per claim 5, Suzouki demonstrated all the elements as applied to the rejection of independent claim 1, *supra*, and further discloses selection between displaying the image represented only by the data group indicating the indispensable points and displaying the image represented by the data group indicating the indispensable points and the data group indicating the supplementary points is made in accordance with data memory capacity required for displaying the image (Figure 6 97 and "FIG. 22A, a modeller 112 receives a signal corresponding to a manual operation of a designer, that is, a person who produces an image, from an inputting apparatus 111 and produces a three-dimensional object in response a manual operation of the designer. The modeller 112 supplies information regarding a curved surface of the produced three-dimensional object to an operation circuit 113 and supplies coordinate values of the apexes of polygons which form the produced three-dimensional object", column 16, line 40-49; whether the indispensable points or supplemental points are needed to generate the image is ultimately decided by the designer, and since all the data needed for display are stored in the Data RAM 97, whatever the data memory capacity RAM 97 provides determines the amount of data to be displayed).

9. As per claim 6, Suzouki discloses a system of displaying an image in which a plurality of points designated on a screen are linked to display the required vector image, comprising:

a data storage member for classifying vector data, indicating a plurality of points for representing the image, into a data group indicating indispensable points required for a minimum recognition of the image, and a data group indicating supplementary

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points for supplementing the indispensable points to represent the more precise image, and for storing the vector data ("the division number is set to 1, as seen in FIG. 14A, and stores the coordinate values of the apexes of the polygon into the destination data RAM 97", column 12, line 57-60, where division number 1 indicates the smallest (indispensable) amount of points is used to represent an image; "FIG. 14B to produce four sub-polygons in accordance with the reference curved surface, and stores coordinate values of the apexes of the four sub-polygons into the destination data RAM 97", column 12, line 66 – column 13, line 2, where the apexes of the sub-polygons are supplementary points); and

an image quality selection member for selecting between reading merely the data group indicating the indispensable points from said data storage member for displaying the image and reading the data group indicating the indispensable points plus the data group indicating the supplementary points from said data storage member for displaying the image ("FIG. 22A, a modeler 112 receives a signal corresponding to a manual operation of a designer, that is, a person who produces an image, from an inputting apparatus 111 and produces a three-dimensional object in response a manual operation of the designer. The modeller 112 supplies information regarding a curved surface of the produced three-dimensional object to an operation circuit 113 and supplies coordinate values of the apexes of polygons which form the produced three-dimensional object", column 16, line 40-49; the curvature of the surface is supplied by the designer, since the curvature determines the amount of apexes data

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are needed to generate the image, it ultimately determines whether the indispensable points or supplemental points are needed to generate the image.)

10. As per claim 7, Suzouki demonstrated all the elements as applied to the rejection of independent claim 6, *supra*, and further discloses said data storage member classifies the vector data, indicating the supplementary points, into a plurality of data groups for supplementing the indispensable points in stages and stores the vector data, and in the displaying of the image said image quality selection member selects among the classified plural data groups indicating the supplementary points in stages to supplement the indispensable points in stages (Figure 14B shows apexes with four polygons, and Figure 14C shows apexes with sixteen polygons. All the data are stored with an identification, column 17, line 17-21).

11. As per claim 9, Suzouki demonstrated all the elements as applied to the rejection of independent claim 6, *supra*, and further discloses said image quality selection member makes, in accordance with the amount of image data, the selection between displaying the image represented only by the data group indicating the indispensable points and displaying the image represented by the data group indicating the indispensable points plus the data group indicating the supplementary points ("FIG. 22A, a modeler 112 receives a signal corresponding to a manual operation of a designer, that is, a person who produces an image, from an inputting apparatus 111 and produces a three-dimensional object in response a manual operation of the designer. The modeller 112 supplies information regarding a curved surface of the produced three-dimensional object to an operation circuit 113 and supplies coordinate

values of the apexes of polygons which form the produced three-dimensional object", column 16, line 40-49; the curvature of the surface is supplied by the designer, since the curvature determines the amount of apexes data are needed to generate the image, it ultimately determines whether the indispensable points or supplemental points are needed to generate the image.)

12. As per claim 10, Suzouki demonstrated all the elements as applied to the rejection of independent claim 6, *supra*, and further discloses said image quality selection member makes, in accordance with data memory capacity required for displaying the image, the selection between displaying the image represented only by the data group indicating the indispensable points and displaying the image represented by the data group indicating the indispensable points plus the data group indicating the supplementary points (Figure 6 97 and "FIG. 22A, a modeller 112 receives a signal corresponding to a manual operation of a designer, that is, a person who produces an image, from an inputting apparatus 111 and produces a three-dimensional object in response a manual operation of the designer. The modeller 112 supplies information regarding a curved surface of the produced three-dimensional object to an operation circuit 113 and supplies coordinate values of the apexes of polygons which form the produced three-dimensional object", column 16, line 40-49; whether the indispensable points or supplemental points are needed to generate the image is ultimately decided by the designer, and since all the data needed for display are stored in the Data RAM 97, whatever the data memory capacity RAM 97 provides determines the amount of data to be displayed).

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13. As per claim 11, Suzouki demonstrated all the elements as applied to the rejection of independent claim 6, supra, and further discloses said data storage member is provided in a server providing image data through a computer network (Figure 5 is a computer network with buses 4 and 42 connecting memory 45, 51, 56 and 58).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzouki as applied to claim 1 above, and further in view of Goto et al. (5,434,591).

As per claim 3, Suzouki demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Suzuoki discloses a method of displaying a vector-mode image. It is noted that Suzuoki does not explicitly disclose the image is represented only by the data group indicating the indispensable points when being scrolled on a screen, however, this is known in the art as taught by Goto et al., hereinafter Goto. Goto discloses a method of displaying image data in which "a readout masking circuit for inhibiting the readout of certain data from the frame memory, whereby pattern information items which need not be displayed during scrolling operation", column 2, line 18-20.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goto into Suzouki because Suzouki discloses a method of displaying a vector-mode image with various points and Goto discloses a method of not displaying non-essential data during scrolling in order to reduce flickering of the scrolled data.

16. As per claim 8, Suzouki demonstrated all the elements as applied to the rejection of independent claim 6, *supra*.

Suzuoki discloses a system of displaying a vector-mode image. It is noted that Suzuoki does not explicitly disclose the image is represented only by the data group indicating the indispensable points when being scrolled on a screen, however, this is known in the art as taught by Goto et al., hereinafter Goto. Goto discloses a system of displaying image data in which "a readout masking circuit for inhibiting the readout of certain data from the frame memory, whereby pattern information items which need not be displayed during scrolling operation", column 2, line 18-20.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Goto into Suzouki because Suzouki discloses a system of displaying a vector-mode image with various points and Goto discloses a system of not displaying non-essential data during scrolling in order to reduce flickering of the scrolled data, column 2, line 29.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Inquiries

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-6133**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Ryan Yang
August 16, 2003